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RESEARCH ARTICLE

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Paraprofessionals' use of classroom management in a small-group intervention

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Abstract

Although previous research suggests the use of classroom management strategies can support student engagement and learning, gaps in the literature still exist including the frequency of classroom management strategies in small-group instruction. The purpose of this descriptive study was to measure the frequency of paraprofessionals' (n = 94) classroom management strategies within the context of a small-group intervention for kindergarteners at-risk of reading difficulties. This study contributes to the field by finding that trends described in previous studies continue to be demonstrated in this targeted instructional setting, in particular, regarding the infrequent use of praise with students at-risk of academic failure. The results of paired-sample sign tests suggest that when providing corrective feedback, paraprofessionals were more likely to specifically label the behavior being reprimanded. However, paraprofessionals infrequently labeled the specific behavior being reinforced when praising students.

KEYWORDS
classroom management, paraprofessionals, small-group instruction

1 | INTRODUCTION

Upon entering the education system, children are expected to adjust their behaviors to meet the behavioral standards of the classroom. For example, children are expected to follow directions and control their behaviors while completing a lesson (Lynne Lane et al., 2007). However, children enter early childhood education with widely varying behavioral skills, and these skills are related to their ability to remain engaged and achieve in the classroom (Howse et al., 2003; Lekwa et al., 2019; McClelland & Cameron, 2011; McClelland et al., 2007).

Instructional practices, such as the use of classroom management strategies, can support the development of children's behavioral skills (Korpershoek et al., 2016), as well as their engagement and learning (Chalk & Bizo, 2004; Dobbs-Oates et al., 2011; Herman et al., 2022). Evidence-based classroom management strategies include specific behavioral praise (Royer et al., 2019) and proactive strategies such as the reviewing of rules and the use of a token economy (Alter & Haydon, 2017; Doll et al., 2013). Although empirical research on classroom management strategies dates back decades (e.g., Madsen et al., 1968), several gaps in the literature still exist. For instance, limited research has investigated how often classroom management strategies are used in early childhood education or in the context of small-group instruction. To our knowledge, previous research has not investigated the use of classroom management strategies in small-group instruction by paraprofessionals, a growing population in education.

The objective of this study was to measure the use of classroom management strategies in the context of targeted, small-group reading instruction. The research questions were What is the frequency of classroom management strategies within the context of targeted small-group instruction? Are nonspecific classroom management strategies used more often than specific classroom management strategies?

2 | PARAPROFESSIONALS

Paraprofessionals, also referred to as teaching assistants, are an ever-growing population especially in early childhood education (Mowrey & Farran, 2021; U.S. Bureau of Labor Statistics, 2022). Current estimates suggest there are over one million paraprofessionals in schools across America (U.S. Bureau of Labor Statistics, 2022). Paraprofessionals are often responsible for both small-group instruction and classroom management (Gerber et al., 2001; Hauerwas & Goessling, 2008; Jones et al., 2021; Mowrey & Farran, 2021). The training and education level of paraprofessionals appears to vary (Friedman-Krauss et al., 2019; U.S. Department of Health and Human Services, 2013), but evidence suggests they generally receive less training than teachers (Freeman et al., 2014; Sosinsky & Gilliam, 2011) and limited training on the use of classroom management strategies (Ratcliff et al., 2011; Stough & Montague, 2014; Wiggs et al., 2021). Although paraprofessionals play an important role in supporting children's development, previous research has not investigated the use of classroom management strategies by paraprofessionals.

3 | THEORETICAL FRAMEWORK

Classroom management generally refers to any actions performed by an educator with the purpose of increasing students' engagement or learning, including encouraging positive student behaviors and correcting inappropriate student behaviors (Emmer & Stough, 2001; Sabornie & Espelage, 2023). Educators typically receive some training on the use of classroom management strategies (Floress, Beschta, et al., 2017; Freeman et al., 2014; Wiggs et al., 2021); however, educators indicate that this is an area of weakness (Shank & Santiague, 2022; Stough & Montague, 2014). The use of classroom management strategies is important because it socializes children to the behavior expectations of schooling. This process of behavioral socialization can be understood as children's internalization of environmental demands and social expectations as their own. Children's regulation of behaviors and emotions shifts from being externally controlled by environmental demands to being internally controlled through this process of socialization (Fox & Riconscente, 2008). Theoretically, the use of classroom management strategies can promote students' socialization and the development of self-regulatory skills (Poulou et al., 2022; Sabornie & Espelage, 2023).

Classroom management strategies are used in all grade levels but are of particular importance in early childhood because students are early in the development of their self-regulatory skills and understanding of the

expectations to participation in instruction (Montroy et al., 2016). Self-regulatory skills refer to the ability to initiate, sustain, and inhibit one's behaviors and emotions to comply with environmental demands and meet learning goals (Bohlmann & Downer, 2016; Rimm-Kaufman et al., 2009). Children's self-regulatory skills are positively related with school readiness and later academic achievement (Hernández et al., 2018; McClelland & Cameron, 2011).

The classroom management strategies in this study can be understood from the behavioral perspective (Bargh & Ferguson, 2000). Defining features of this traditional theoretical perspective include a belief that behaviors are influenced by environmental factors and are the result of the relation between an antecedent, behavior, and consequence (i.e., three-term contingency; Kern & Clemens, 2007; Skinner, 1965). Classroom management systems often include the combination of reactive and proactive strategies (Reinke et al., 2014; Sabornie & Espelage, 2023). Reactive classroom management strategies involve providing reinforcing or aversive consequences to students' behavior (Bertsch et al., 2017; Royer et al., 2019). For example, a teacher may praise or reprimand a student after the student exhibits particular behaviors. Use of proactive classroom management strategies indicates an attempt to control the antecedent of behavior and decrease problematic behaviors before they occur (e.g., establishing/reviewing rules and procedures, removing distractions; Evertson & Poole, 2008).

4 | CLASSROOM MANAGEMENT STRATEGIES

Our selection of classroom management strategies in this study was inspired by literature reviews (Beaman & Wheldall, 2000; Jenkins et al., 2015; Brandi Simonsen et al., 2008) and meta-analyses on the topic (Korpershoek et al., 2016; Oliver et al., 2011). We assessed the use of easily implemented, cost-effective classroom management strategies: praise, corrective feedback, rule review, and token economy. Additionally, we categorized instances of praise and corrective feedback according to the specificity of the feedback (i.e., specific, nonspecific). Although the strategies in this study are considered to be commonly used strategies, they do not represent an exhaustive list of classroom management strategies.

4.1 | Reactive strategies

4.1.1 | Praise

Praise may function as a reinforcer, which is a consequence that increases the frequency of a target behavior (Partin et al., 2009). Studies have shown that teachers often use praise as an effective consequence to increase the frequency of children's positive behaviors (Chalk & Bizo, 2004; Ennis et al., 2018; Ford et al., 2001; Poulou et al., 2022). Research differentiates between *specific* praise (specific behavioral praise, labeled praise) and *nonspecific* praise (general praise or nonlabeled praise; Floress, Berlinghof, et al., 2017; Jenkins et al., 2015; Markelz et al., 2022). Specific praise states the exact behavior that is being encouraged (e.g., "I like how you are sitting quietly"), whereas nonspecific praise does not (e.g., "Good job"). Although evidence suggests specific praise is more effective than nonspecific praise, because the child knows exactly what they did correctly (Royer et al., 2019; Sutherland et al., 2000), the results of Jenkins et al. (2015) and other studies (Floress et al., 2018; Gable et al., 2009) suggest teachers use nonspecific praise more frequently.

Research suggests wide ranges and differences between the rates in which teachers use specific and nonspecific praise (Floress, Beschta, et al., 2017; Owens et al., 2018). As reported in Jenkins et al.'s (2015) literature review, rates of nonspecific praise ranged from 13 (Sutherland et al., 2000) to 39 an hour (Floress & Jenkins, 2015) and rates of specific praise ranged from 2 (Burnett & Mandel, 2010) to 9 an hour (Floress & Jenkins, 2015). Others have found rates of praise as low as once per hour in classrooms with students with emotional and behavioral disorders (Kalis et al., 2007; Shores et al., 1993; Sutherland et al., 2000).

4.1.2 | Corrective feedback

In addition to encouraging desirable behaviors with the use of praise, teachers often discourage problem behaviors (e.g., interruptions, off-task behaviors) with the use of corrective feedback. Corrective feedback may function as a punishment, which is a consequence that decreases the frequency of a behavior. Specific corrective feedback explicitly states the undesired behavior that is being discouraged and/or the alternative behavior that should be performed (e.g., "stop tapping your pencil," "sit in your seat"), whereas nonspecific corrective feedback does not (e.g., "Stop that," "You need to follow the rules"). When paired with praise, specific corrective feedback is considered more effective than nonspecific corrective feedback because the student knows the exact behavior that is inappropriate (Ford et al., 2001; Matheson & Shriver, 2005).

Although conducted with small sample sizes, the results of some studies suggest that the use of brief and specific corrective feedback is an effective strategy to decrease the frequency of undesired behaviors (Abramowitz et al., 1987; Acker & O'Leary, 1987; Bertsch et al., 2017). However, sometimes corrective feedback may have the unintended consequence of increasing children's undesired behaviors (i.e., teacher attention becomes a reinforcer; Gable et al., 2009; Shores et al., 1993). Additionally, some evidence suggests that a more positive tone, and the less frequent use of corrective feedback, are positively related to learning (Caldarella et al., 2021; Christopher & Farran, 2020; Farran et al., 2017). Research suggests that preschool teachers use corrective feedback approximately three times per minute (Bertsch et al., 2017) and much more frequently than praise (Merrett & Wheldell, 1992; Ritz et al., 2014). Some evidence suggests that teachers may use corrective feedback even more frequently when classrooms are composed of students with learning or behavioral disorders (Gable et al., 1982).

4.2 | Proactive strategies

From a theoretical perspective, proactive strategies are preferred overreactive strategies because proactive strategies allow teachers to control the environment (i.e., antecedents; Evertson & Poole, 2008; Nagro et al., 2019; Sabornie & Espelage, 2023). Given that limited research has been conducted to explore the naturalistic use of proactive classroom management strategies, in this study, we focused on two proactive classroom management strategies: the reviewing of rules and the use of a token economy.

4.2.1 | Rule review

Rules are statements describing acceptable and unacceptable student behaviors (Gable et al., 2009; Madsen et al., 1968). The characteristics of effective rules include being stated positively; specifically, there being a limited number of rules, and that rule-following behaviors are modeled by the teacher or children (Hester et al., 2009; Kern & Clemens, 2007). Rules may be more effective when they are consistently related to positive and/or negative consequences (Alter & Haydon, 2017). Rules can be explicitly linked to positive and/or negative consequences through the implementation of a token economy (Martini-Scully et al., 2000).

4.2.2 | Token economy

In a token economy, tokens (e.g., tickets, marbles, poker chips) are awarded for performing desirable behaviors or for not performing undesirable behaviors. Importantly, these tokens are exchanged for rewards (i.e., reinforcers) which may be a variety of prizes or privileges (Filcheck & McNeil, 2004). Substantial evidence has supported the

efficacy of token economies for supporting young children's behavioral change (Doll et al., 2013; Filcheck & McNeil, 2004; Maggin et al., 2011; Soares et al., 2016). Some critiques of token economies include that they negatively influence intrinsic motivation (i.e., drive to perform a behavior because it is inherently enjoyable or satisfying) and that students may become externally motivated (i.e., drive to perform a behavior because receipt of external prize or reward) and dependent on external reinforcers (Bear et al., 2017; Doll et al., 2013; Kohn, 1999).

Researchers have called for studies to measure classroom management in various settings in early childhood (Floress, Berlinghof, et al., 2017; Jenkins et al., 2015), especially as setting might be influential (Ruiz et al., 2014). We responded to this call for research by measuring the frequency of classroom management strategies by paraprofessionals in the context of small-group instruction for kindergarten students at-risk of reading difficulties. It may be particularly important to understand this setting because small-group instruction is commonly used as supplemental instruction for students at-risk of academic difficulties (Lembke et al., 2010).

5 | SMALL-GROUP INSTRUCTION

Small-group instruction typically consists of instruction that is delivered to groups of three to six students. The use of small-group instruction for students at-risk of academic failure has recently increased, in part due to legislative mandates related to Multitiered Systems of Support (MTSS; Van Camp et al., 2020; *Every Student Succeeds Act* 20 U.S.C. § 6301, 2015; *Individuals with Disabilities Education Act* 20 U.S.C. § 1400, 2004; Wanzek & Vaughn, 2007; Zirkel & Thomas, 2010). MTSS provides a structured framework to provide increasingly individualized, high-quality instruction to students at-risk of academic failure. Within MTSS, Tier 1 consists of universal instruction that is provided to all students. Tier 2 consists of targeted evidence-based instruction focused on the specific skills in need of further development for students who require additional support beyond Tier 1 instruction (Lembke et al., 2010). Tier 2 instruction is often delivered in small groups. Tier 3 is the highest level of support in MTSS and consists of individualized instruction for students who have not responded adequately to Tiers 1 and 2.

6 | THE CURRENT STUDY

This study is a secondary analysis using data from four language/literacy-focused interventions that took place in kindergarten for students at-risk of academic failure (i.e., Tier 2, small-group intervention; Phillips et al., 2021). Although evidence suggests that Tier 2 small-group instruction is an effective instructional setting (Wanzek et al., 2016) and the use of small-group instruction has increased in recent years, researchers have not yet investigated how classroom management strategies are used in this setting. The Tier 2, small-group lessons were delivered by paraprofessionals as pull-out instruction (i.e., children were temporarily removed from their classrooms each day to complete the intervention; Jones et al., 2021). The purpose of this secondary data analysis study was to understand these paraprofessionals' use of classroom management strategies as they delivered targeted, small-group instruction. For the first research question, "What is the frequency of paraprofessionals' use of classroom management strategies within the context of targeted small-group instruction?" we expected that paraprofessionals would use corrective feedback more frequently than praise. Due to the lack of research on the frequency of proactive classroom management strategies in this context, it was unclear how frequently paraprofessionals would review the rules or use the token economy. For the second research question, "Do paraprofessionals use nonspecific responses more often than specific responses?" it was hypothesized that paraprofessionals in this study would use nonspecific responses more frequently than specific responses, when providing both praise and corrective feedback.

7 | METHOD

7.1 | Sample

The sample included 94 paraprofessionals (97% female; ranging from approximately 20–60 years of age) leading 116 small groups of students (~3–5 students per group) in 34 public schools. The paraprofessionals involved in this study were employees of the research team but selected to mirror the range of credentials and experience of school-employed paraprofessionals. The highest degree of approximately 54% of paraprofessionals was a bachelor's degree; 17% had a master's degree, 9% had an associate's degree, and 4% had a high school diploma (16% were missing education level). Approximately 77% of paraprofessionals were White and 10% were African American. One teacher identified as Hispanic. Racial and ethnic information was missing for 14% of the paraprofessionals. The results of preliminary analyses not reported in this paper suggest that the characteristics of the paraprofessionals were not related to the use of classroom management strategies.

The larger study from which the data were drawn specifically targeted students at the bottom half of the distributions of language skills. Kindergarten students were recruited from public schools in a southeastern state. Once consented, all child participants were screened and determined to be eligible for further participation if they met the inclusion criteria of being at least 60 months old at the time of consenting, below the 47th percentile on the Expressive One-Word Picture Vocabulary Test, 4th edition (EOWPVT; Martin & Brownell, 2010), and if they did not demonstrate cognitive or linguistic impairments severe enough to make standardized testing procedures inappropriate. Of the approximately 400 kindergarten students taught by these paraprofessionals, 48.7% were males and 51.3% were females; 51.3% of students were White, 40.3% were African American, 2.1% were Asian American, 5.9% were multiracial, 0.5% were other nonreported races; 5.1% of the students were Hispanic. The average age of the kindergarten students was 71.64 months (SD = 5.05, minimum = 63.00, maximum = 89.00). Although the students receiving the interventions were not directly measured in this study, their influence was implicit in the idea that classroom management strategies are provided to meet students' developmental needs and learning goals.

7.2 | Procedures

This study was approved by the Human Subjects Committee at the investigator's university (#2018.26490) and was carried out in accordance with ethical guidelines for research with human subjects (National Committee for Research Ethics in the Social Sciences and the Humanities, 2022). The study in which we collected these data took place in the 2012–2013 school year in the southeastern United States.

To support the paraprofessionals in the delivery of the interventions, they received brief classroom management training, which taught them how to review the rules of the lesson, reinforce children's positive behaviors, and use a token economy. Despite this common training, we expected variability in paraprofessionals' use of classroom management strategies because of their diverse levels of experience and the varying children in their small groups. Because the primary responsibility of the paraprofessionals was to deliver the language-focused interventions, the paraprofessionals were encouraged, but not required, to use the classroom management strategies taught in the training.

The study included four distinct interventions, which all focused on students' language/literacy development but targeted a more specific contributor to reading comprehension (e.g., oral comprehension, syntax, text structure, morphological awareness). The interventions varied in length from 8 to 12 weeks; all included sessions of 20–25 min 4 days per week. Preliminary analysis suggested that the rates of classroom management strategies did not significantly differ across the four interventions; therefore, the results in this paper are reported combining across the four interventions.

7.3 | Measures

We coded how frequently paraprofessionals used praise, corrective feedback, and proactive strategies while implementing a language-focused, small-group intervention. Additionally, we characterized praise and corrective feedback according to their specificity (i.e., specific, nonspecific). To assure validity, we created procedures and operational definitions in this study based on those procedures and operationalizations used in previous studies that have measured the use of classroom management strategies during observations (e.g., Bertsch et al., 2017; Christopher & Farran, 2020; Floress et al., 2018; Floress & Jenkins, 2015). In this study, praise was defined as reactive, verbal statements that encourage or approve of a students' behavior (e.g., "I like how everyone is paying attention," "Thank you for raising your hand"). Corrective feedback was defined as reactive, verbal statements that discourage or disapprove of a students' behavior (i.e., reprimands, commands; e.g., "You need to raise your hand before speaking," "Stay in your seat"). Proactive strategies included the use of Rule Review or the Token Economy. Rule review was defined as reviewing and/or discussing the rules before or during a lesson. The rules reviewed by the paraprofessionals in the present study included (1) talk only about the lesson, (2) use a soft voice, and (3) be nice and helpful to your friends. Token Economy was defined as referencing the token economy system (e.g., children earned smiley faces, which were exchanged for a prize at the end of the week). We coded each rule that was reviewed, as well as each use or reference to the token economy, as a single instance of proactive strategy use.

We measured the frequency of paraprofessionals' use of classroom management strategies during four lessons, which were selected using stratified random sampling. All lessons were audio recorded by the paraprofessionals; the primary researcher and trained research assistants used these audio recordings to code the frequency of classroom management strategies. Although not all instances of classroom management were audible in the recordings, such as a paraprofessional putting their finger in front of their mouth to signal that children should be silent, it was expected that most instances would be suitable for quantification.

We coded a total of 464 recordings, consisting of nearly 9000 min of observations. Research assistants completed a reliability check with the primary investigator before coding actual tapes. Drift checks were completed throughout the coding process with the use of the same procedures but different audiotapes. We calculated the Intraclass Correlation Coefficient, a widely used index of inter-rater reliability that quantifies the degree of agreement between coders and ranges from 0 to 1 with higher scores indicating greater agreement, for all the variables in the study. The Intraclass Correlation Coefficient was above 0.83 for all the variables in this study, which indicated sufficient reliability (Koo & Li, 2016).

7.4 | Analyses

All statistical analysis was conducted in International Business Machines Statistical Package for Social Sciences (IBM SPSS Version 28). There was no missing data for paraprofessionals' use of classroom management strategies. Following the coding of classroom management strategies during four lessons, we calculated the average frequency per lesson (Research Question 1). We also calculated Pearson's correlation coefficients to understand and evaluate the strength of relations between all classroom management strategies (i.e., |0.00| − |0.10| = negligible correlation, |0.10| − |0.39| = weak correlation, |0.40| − |0.69| = moderate correlation, |0.70| − |0.89| = strong correlation, |0.90| − |1.00| = very strong correlation; Schober et al., 2018). Finally, we conducted a paired-samples sign test to determine if paraprofessionals used specific and nonspecific strategies (i.e., praise, corrective feedback) at significantly different rates (Research Question 2; Dixon & Mood, 1946; Sarty, 2020). The paired-samples sign test, an alternative to the Wilcoxon signed-rank test but without the requirement for normal distribution of data, tests for a significant difference in the medians of two paired samples. Specifically, we examined the difference between the median score for specific praise and the median score for nonspecific praise, as well as the difference between the median score for specific corrective feedback and the median score for nonspecific corrective feedback. A negative

difference indicates that the median score for the nonspecific strategy is greater than the median score for the specific strategy, a positive difference indicates that the median score for the specific strategy is greater than the median score for the nonspecific strategy, and a tie indicates that the median scores for the specific and nonspecific strategies are the same (see Note in Table 3). The paired-samples sign test also indicates whether the differences between medians are statistically significant.

8 | RESULTS

8.1 | Frequency of classroom management strategies

The purpose of the first research question was to estimate paraprofessionals' use of classroom management strategies (Table 1). The results suggested that paraprofessionals praised children's behavior approximately twice per lesson (mean = 1.64, SD = 1.62) and used corrective feedback approximately nine times per lesson (mean = 9.11, SD = 5.11). Although each lesson lasted less than an hour (mean = 19.07 min, SD = 3.26), the averages per hour were determined to compare with the results of previous research. At this rate, paraprofessionals would have provided praise approximately five times and corrective feedback nearly 29 times in a single hour. The results further suggested that paraprofessionals reviewed the rules of the lesson or used the token economy approximately once per lesson (mean = 1.23, SD = 1.11).

Pearson's correlation coefficients were calculated to explore the relations between the behavior management strategies in this study (Table 2). Moderate correlations (i.e., Pearson correlation coefficients > 0.50) existed between the use of nonspecific praise and specific corrective feedback ($r = .505$; $p < .01$), as well as between the use of specific and nonspecific corrective feedback ($r = .582$, $p < .01$). The results suggest that paraprofessionals who frequently used specific corrective feedback were also likely to frequently use nonspecific praise and nonspecific corrective feedback. No moderate or stronger correlations were found between proactive strategies and the other classroom management strategies.

8.2 | Specificity of responses

The results of the paired-samples sign test ($Z = 4.142$, $p < .001$) indicated that paraprofessionals used specific praise (mean = 0.61, SD = 0.80) significantly less frequently than nonspecific praise (mean = 1.03, SD = 1.13). For example, paraprofessionals used specific praise more frequently than nonspecific praise in only 28 small groups (Table 3). When providing corrective feedback, paraprofessionals used specific corrective feedback approximately seven times per lesson (mean = 6.76, SD = 3.86) and nonspecific corrective feedback approximately twice per lesson (mean = 2.34, SD = 1.79). For example, paraprofessionals used specific corrective feedback less frequently than nonspecific corrective feedback in only one small group (Table 3). Again, the results of the paired-samples sign test suggested that the frequency of specific and nonspecific corrective feedback significantly differed ($Z = 10.492$, $p < .001$).

9 | DISCUSSION

This study provides one of the first explorations of classroom management strategy implementation by paraprofessionals within a small-group context. The results suggest that trends seen in whole-class instruction are also seen in the more targeted setting of small-group instruction. For example, paraprofessionals tended to use corrective feedback at a greater rate than praise and proactive strategies. Implications are discussed including strategies to support the effective use of classroom management strategies.

TABLE 1 Paraprofessionals' average rate of classroom management strategies.

Strategy	Average frequency/rate		Minimum	
	Per lesson (SD)	Per hour[a]	Per lesson	Maximum
Praise	1.64 (1.62)	5.17	0.00	9.00
Specific	0.61 (0.80)	1.93	0.00	4.75
Nonspecific	1.03 (1.13)	3.25	0.00	6.25
Corrective feedback	9.11 (5.11)	28.74	1.25	25.50
Specific	6.76 (3.86)	21.35	1.00	21.00
Nonspecific	2.34 (1.79)	7.39	0.00	9.75
Proactive strategies	1.23 (1.11)	3.88	0.00	5.25

[a]Estimated from average per lesson which lasted ~19 min.

TABLE 2 Correlations between classroom management strategies.

	P	SP	NSP	CF	SCF	NSCF	PS
P	-						
SP	0.766**	-					
NSP	0.890**	0.389**	-				
CF	0.475**	0.271**	0.489**	-			
SCF	0.472**	0.242**	0.505**	0.959**	-		
NSCF	0.340**	0.252**	0.309**	0.789**	0.582**	-	
PS	0.314**	0.347**	0.204**	0.384**	0.364**	0.311**	-

Abbreviations: CF, corrective feedback; NSCF, nonspecific corrective feedback; NSP, nonspecific praise; P, praise; PS, proactive strategies; SCF, specific corrective feedback; SP, specific praise.

**$p < .01$.

9.1 | Praise

The results suggest that paraprofessionals infrequently praised students' behaviors (approximately twice per lesson). Additionally, as has been seen in previous research (Floress, Beschta, et al., 2017; Floress & Jenkins, 2015), when paraprofessionals did praise students' behaviors, they used nonspecific feedback (e.g., "good job") more frequently than specific feedback (e.g., "good job staying in your seat during the lesson"). Although previous research has not measured the frequency of praise in the context of small-group instruction for kindergarten students at-risk of academic failure, the results align with other studies that have found similarly low rates of praise (Beaman & Wheldall, 2000), particularly in classrooms with students at-risk of learning, behavioral, or emotional disorders in various grade levels (Jenkins et al., 2015; Kalis et al., 2007; Sutherland et al., 2000).

It may be particularly beneficial to use praise when teaching students at-risk of academic failure because evidence suggests praise supports behavioral development and learning (e.g., Acker & O'Leary, 1987; Brandi Simonsen et al., 2008; Herman et al., 2022; Sutherland et al., 2000). Teachers can increase their use of praise by increasing the number of opportunities students have to respond to questions or tasks (Partin et al., 2009). Evidence suggests that opportunities to respond are positively related to the frequency of teacher praise, as well as students' academic and social behaviors (Sutherland et al., 2002). When praising students, it is recommended that

TABLE 3 Frequency table for paired-samples sign test.

Classroom management strategy	Differences	*N*
SP-NSP	Negative differences[a]	70
	Positive differences[b]	28
	Ties[c]	18
	Total	116
SCF-NSCF	Negative differences[a]	1
	Positive differences[b]	115
	Ties[c]	0
	Total	116

Abbreviations: CF, corrective feedback; NSCF, nonspecific corrective feedback; NSP, nonspecific praise; P, praise; PS, proactive strategies; SCF, specific corrective feedback; SP, specific praise.

[a]Specific < Nonspecific.

[b]Specific > Nonspecific.

[c]Specific = Nonspecific.

teachers precisely indicate the desired student behavior (i.e., specific behavioral praise; Jenkins et al., 2015) because it helps students understand exactly what they did well and makes the acceptable behavior more likely to occur in the future (Royer et al., 2019). It is possible that the more frequent use of praise may support students' learning and maximize the positive outcomes related to participation in instruction (Van Camp et al., 2020).

Although evidence suggests students are more likely to demonstrate desired behaviors when teachers use praise more frequently (Chalk & Bizo, 2004; Sutherland et al., 2000), the exact amount of praise called for to improve student behavior is unknown (Floress & Jenkins, 2015). Some studies suggest rates as high as 24 an hour can support the frequency of students' positive behaviors (Ford et al., 2001). It is likely that this amount may vary due to instructional setting (e.g., small-group instruction) and/or characteristics of the students (e.g., age, level of achievement, self-regulatory skills). For example, it is possible that young children may require more frequent use of praise since they are early in the development of their self-regulatory skills (Montroy et al., 2016).

9.2 | Corrective feedback

In contrast to paraprofessionals' infrequent use of praise, the results suggest paraprofessionals reprimanded students' behaviors approximately nine times per lesson, which is more than four times as often as they praised students. Compared to other studies, the paraprofessionals in the current study used corrective feedback at a high but not necessarily uncommon rate. For example, the ratio of praise to corrective feedback during the ~19 min lessons was 2:9 in the current study, whereas Christopher and Farran (2020) reported a ratio of 1:3 by teachers during day-long observations in early childhood and Caldarella et al. (2021) reported a ratio of 1:9 during 20-min observations in middle school. This is concerning when considering that some evidence suggests that less frequent use of corrective feedback and a more positive tone are related to academic gains in early childhood (Farran et al., 2017).

Contrary to the trend seen with praise, paraprofessionals used specific corrective feedback (e.g., "put your hands on your lap") more frequently than nonspecific corrective feedback (e.g., "stop that") when reprimanding students. This is a promising result because evidence suggests corrective feedback is more effective when the teacher precisely indicates the expected behavior (Bertsch et al., 2017; Matheson & Shriver, 2005). Other

recommendations regarding the effective use of corrective feedback in early childhood include the use of child-friendly language and "do" commands instead of "don't" commands (Owens et al., 2018).

Still, limited recent research has been conducted to explore the effectiveness of corrective feedback in classrooms (Owens et al., 2018) and some studies that date back several decades provide weak evidence of effectiveness on students' behaviors (Abramowitz et al., 1987; Acker & O'Leary, 1987). Other researchers (e.g., Gable et al., 2009) have recommended that corrective feedback should be used less often than praise because teachers who use reprimands or commands more frequently may unintentionally pay greater attention to children's negative behaviors than their positive behaviors. The frequent use of corrective feedback may also minimize students' number of positive experiences (Jenson et al., 2004) and negatively influence students' relationships with the teacher and their peers (Kennedy & Haydon, 2021). Some evidence even suggests kindergarteners' academic gains are related to the ratio of praise to corrective feedback they experience (Christopher & Farran, 2020).

Teachers may reduce their use of corrective feedback, and increase their use of praise, by waiting at least a few seconds after a reprimand before providing additional feedback (Matheson & Shriver, 2005). For example, a teacher who provides corrective feedback by saying, "I need you to sit down in your seat," should wait a few seconds and praise the student if they sit back down (e.g., "thank you for returning to your seat"). This would result in a multi-second wait between corrective feedback and a ratio of praise to corrective feedback more similar to that recommended in the literature (Caldarella et al., 2021; Jenson et al., 2004; Shores et al., 1993). Moreover, alternatives to the use of commands include the use of choices, questions, planned ignoring, and proactive classroom management strategies (Gable et al., 2009; Madsen et al., 1968).

9.3 | Proactive strategies

Experts suggest that educators should attempt to manage classroom behaviors proactively instead of reactively (Evertson & Poole, 2008). However, the results of this study align with previous observational research suggesting educators do not routinely utilize proactive classroom management strategies such as reviewing the rules or using a token economy (Reinke et al., 2014). Although evidence suggests educators can be trained to effectively implement a token economy (Evertson & Poole, 2008; Filcheck et al., 2004), it requires considerable effort including consistent delivery of consequences (Maggin et al., 2011). It is possible that the paraprofessionals who were implementing the language-focused interventions in the current study rarely used the token economy because they received insufficient training on the use of this classroom management strategy or because it was not focal to the language-focused interventions.

In contrast to implementing a token economy, reviewing rules is an easily implemented, cost-free classroom management strategy that can be incorporated into lessons (Alter & Haydon, 2017; Martini-Scully et al., 2000). It is possible that the paraprofessionals did not routinely review rules because they were worried they would not have enough time to complete the entire lesson or because of insufficient classroom management training. It is also possible that the paraprofessionals reviewed the rules of the lesson before they began recording the lesson.

The sample used in this study was a particularly useful one in which to measure the frequency of classroom management strategies because of the likely presence of children at increased likelihood of displaying challenging or disruptive behaviors. Previous research suggests that academic performance has a positive relation with behavioral skills (Allan et al., 2014; Bohlmann et al., 2015; Howse et al., 2003; McClelland et al., 2007). Thus, it is likely that some of the students who participated in the small-group lessons had behavioral weaknesses and presented a number of conduct-related behaviors (e.g., off-task behaviors) that could be targeted with the use of classroom management strategies. For this reason, the rates of classroom management strategies in this study may differ than in a small-group instructional setting with students with average or above-average language skills.

9.4 | Limitations

This study was secondary analysis of data that were collected for differing purposes from the current study. For example, the audio-recordings, which were used to measure the frequency of classroom management strategies, were originally collected for the purpose of providing feedback related to fidelity of implementation for the language-related intervention. Although it is plausible that a large percentage of the classroom management strategies were audible and coded in this study, there are likely some inaudible classroom management strategies (e.g., raising hand, flipping token economy card). Future research should mitigate this by using direct observation or video recordings to measure the frequency of classroom management strategies.

Due to the fact that instructors were paid members of the research team that were hired to complete the lessons, and the majority had at least a bachelor's degree, the results of this study are most generalizable to other Tier 2 settings within MTSS models, where teachers or specialists are hired to conduct targeted small-group instruction (Hauerwas & Goessling, 2008). In addition to being trained to conduct the intervention, paraprofessionals were also briefly trained to use a token economy to reinforce positive behaviors. Thus, it is possible that the rates of classroom management strategies in this study are actually greater than what would be observed in the general education classroom or with paraprofessionals receiving different training.

9.5 | Implications

Paraprofessionals, alongside teachers, need to be trained to manage behaviors because paraprofessionals often share instructional and noninstructional responsibilities with the lead teacher (Gerber et al., 2001; Mowrey & Farran, 2021). Evidence suggests that educators receive widely varying preparation regarding the use of classroom management strategies (Emmer & Stough, 2001; Freeman et al., 2014). This substantial variability in the classroom management training received is exacerbated for paraprofessionals who receive less training than lead teachers (Sosinsky & Gilliam, 2011; Wiggs et al., 2021). Additionally, paraprofessionals and lead teachers often identify classroom management as both an area of importance and weakness (Shank & Santiague, 2022; Stough & Montague, 2014). Evidence suggests training, video scenarios, and self-monitoring can support teachers and paraprofessionals' use of classroom management strategies (Chalk & Bizo, 2004; Gaspar et al., 2023; Kalis et al., 2007; Simonsen et al., 2013; Thiel et al., 2023).

9.6 | Future directions

Further research is needed to obtain a comprehensive and generalizable understanding of paraprofessionals' use of classroom management strategies. Researchers should continue to conduct detailed observations of varying classroom management strategies including but not limited to the strategies in this study. For example, researchers may measure other proactive classroom management strategies including the use of routines, schedules, and classroom organization. We encourage others to measure the classroom management strategies of both lead teachers and paraprofessionals in different instructional settings (e.g., whole-class, small-group instruction) and grade levels. It would also be beneficial to measure classroom management strategies multiple times across a school year to understand possible trends. Future studies may also explore predictors of educators' use of classroom management strategies including school-level factors such as school type (e.g., public, private) and teacher-level factors such as years of experience, highest level of education, gender, and other characteristics such as motivation and personality.

Additional research is needed to understand the benefits of varying classroom management strategies for students' behavioral development, learning, motivation, and the implementation of small-group instruction. In the

context of interventions, research can explore if the use of classroom management strategies relates to fidelity of implementation. It is possible that using classroom management strategies may support students' engagement, paraprofessional-student relationship, and teachers' implementation of a curriculum.

10 | CONCLUSION

The results of this study add to the field of research by describing paraprofessionals' use of classroom management during targeted, small-group instruction in kindergarten. Even in this targeted instructional setting, trends described in previous research continued to be demonstrated, in particular regarding the very infrequent use of specific praise with students at-risk of academic failure. It is important for educators to be aware of how frequently they are, respectively, praising and reprimanding students' behaviors because it is possible that the more frequent use of praise, particularly specific praise, can facilitate children's engagement and learning.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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